What is claimed is:

1. A laser scanning unit, comprising a semiconductor laser, a collimator, a micro electronic mechanical system (MEMS) oscillatory mirror, and an fθ lens; said MEMS oscillatory mirror being disposed between said collimator and said fθ lens, so that laser beams emitted from said semiconductor laser and passed through said collimator form parallel beams that are directly projected onto said MEMS oscillatory mirror; said MEMS oscillatory mirror oscillating in harmonic motion at regular oscillating amplitude to control a direction in which said laser beams are reflected from said oscillatory mirror onto said fθ lens, so that a scanning linearity effect required by said laser scanning unit may be achieved.

2. The laser scanning unit as claimed in claim 1, wherein said collimator and said MEMS oscillatory mirror are provided in said laser scanning unit without any cylindrical lens disposed therebetween.

3. The laser scanning unit as claimed in claim 1, wherein said laser beams emitted from said

semiconductor laser have a central axis that is aligned with a mechanic center of said MEMS oscillatory mirror.

4. The laser scanning unit as claimed in claim 1, wherein said semiconductor laser has an input signal that may be modulated, so that said modulated input signal is synchronized with said harmonic motion of said MEMS oscillatory mirror.

5. The laser scanning unit as claimed in claim 1, wherein said $f\theta$ lens is replaced with a $f\sin\theta$ lens to match said harmonic motion of said MEMS oscillatory mirror.

6. The laser scanning unit as claimed in claim 1, wherein said $f\theta$ lens may be a single-element scanning lens or a two-element scanning lens.